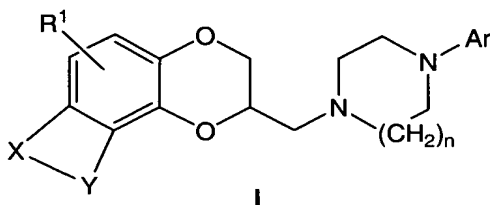


What is claimed is:

1. A compound of formula I:



wherein

R^1 is hydroxy, halo, cyano, carboxamido, carboalkoxy of 2 to 6 carbon atoms, trifluoromethyl, alkyl of 1 to 6 carbon atoms, alkanoyloxy of 2 to 6 carbon atoms, amino, mono- or di-alkylamino in which each alkyl group has 1 to 6 carbon atoms, alkanamido of 2 to 6 carbon atoms, or alkanesulfonamido of 1 to 6 carbon atoms;

the group $X-Y$ is $-N=C(R^2)-C(R^3)=N-$, $-N=C(R^2)-C(R^4)=CH-$, $-N=C(R^2)-N=CH-$, $-N=C(R^2)-O-$, or $-NH-C(R^5)=CH-$;

R^2 and R^3 are, independently, hydrogen, halo, amino, mono- or di-alkylamino in which each alkyl group has 1 to 6 carbon atoms or alkyl of 1 to 6 carbon atoms;

R^4 is hydrogen or alkyl of 1 to 6 carbon atoms;

R^5 is hydrogen, halo, trifluoromethyl, pentafluoroethyl or alkyl of 1 to 6 carbon atoms;

Ar is phenyl, naphthyl, indolyl, indazolyl, thienyl, pyridinyl, pyrimidinyl, quinolinyl, benzofuranyl, benzothienyl, benzoisothiazolyl, or benzisoxazolyl, each optionally substituted with one to three substituents independently selected from hydroxy, halo, cyano, carboxamido, carboalkoxy of 2 to 6 carbon atoms, trifluoromethyl, alkyl of 1 to 6 carbon atoms, alkanoyloxy of 2 to 6 carbon atoms, amino, mono- or di-alkylamino in which each alkyl group has 1 to 6 carbon atoms, alkanamido of 2 to 6 carbon atoms, or alkanesulfonamido of 1 to 6 carbon atoms; and

n is 1 or 2;

or pharmaceutically acceptable salts thereof.

2. A compound according to claim 1, wherein R¹ is hydrogen, halo, cyano, trifluoromethyl, alkyl of 1 to 6 carbon atoms or alkoxy of 1 to 6 carbon atoms.
3. A compound according to claim 1, wherein R¹ is hydrogen, halo or alkoxy of 1 to 6 carbon atoms.
4. A compound according to claim 1, wherein R¹ is hydrogen.
5. A compound according to claim 1, wherein Ar is phenyl, quinolinyl, benzofuranyl, benzothienyl, or indolyl, each optionally substituted.
6. A compound according to claim 1, wherein X-Y is $\text{-N=C(R}^2\text{)-C(R}^4\text{)=CH-}$ and R⁴ is hydrogen or alkyl of 1 to 3 carbon atoms.
7. A compound according to claim 1, wherein R² and R³ when present are independently selected from hydrogen, amino or alkyl of 1 to 6 carbon atoms.
8. A compound according to claim 1, wherein R² and R³ when present are independently hydrogen or alkyl of 1 to 3 carbon atoms.
9. A compound according to claim 1, wherein R⁵ is hydrogen, trifluoromethyl, pentafluoroethyl or alkyl of 1 to 6 carbon atoms.
10. A compound according to claim 1, wherein R⁵ is hydrogen, trifluoromethyl or alkyl of 1 to 3 carbon atoms.
11. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(3-chlorophenyl)piperazin-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

12. A compound according to claim 1, wherein said compound is (2S)-2-{{4-(4-chlorophenyl)piperazin-1-yl}methyl}-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
13. A compound according to claim 1, wherein said compound is (2S)-2-{{4-(3,4-dichlorophenyl)piperazin-1-yl}methyl}-8-methyl-2,3-dihydro[1,4]dioxine[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
14. A compound according to claim 1, wherein said compound is (2S)-2-{{4-(2-methoxyphenyl)piperazin-1-yl}methyl}-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
15. A compound according to claim 1, wherein said compound is (2S)-2-{{4-(3-methoxyphenyl)piperazin-1-yl}methyl}-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
16. A compound according to claim 1, wherein said compound is (2S)-2-{{4-(4-methoxyphenyl)piperazin-1-yl}methyl}-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
17. A compound according to claim 1, wherein said compound is (2S)-2-{{4-(dihydrobenzo[1,4]dioxin-5-yl)piperazin-1-yl}methyl}-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
18. A compound according to claim 1, wherein said compound is (2S)-8-methyl-2-[4-(3-trifluoromethyl-phenyl)piperazin-1-ylmethyl]-2,3-dihydro[1,4]dioxine[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

19. A compound according to claim 1, wherein said compound is (2S)-8-methyl-2-[4-(3-fluorophenyl)piperazin-1-ylmethyl]-2,3-dihydro[1,4]dioxine[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
20. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(2,3-dimethylphenyl)piperazin-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
21. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(3,4-dimethylphenyl)piperazin-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
22. A compound according to claim 1, wherein said compound is (2S)-8-methyl-2-[(4-quinolin-2-yl)piperazin-1-yl]methyl]-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
23. A compound according to claim 1, wherein said compound is ((2S)-8-methyl-2-{4-(6-nitroquinolin-2-yl)piperazin-1-yl]methyl)-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
24. A compound according to claim 1, wherein said compound is (2S)-8-methyl-2-{4-(6-chloroquinolin-2-yl)piperazin-1-yl]methyl)-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
25. A compound according to claim 1, wherein said compound is 2-(4-[[2S)-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinolin-2-yl]methyl]piperazin-1-yl}quinoline-6-carbonitrile or a pharmaceutically acceptable salt thereof.

26. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(1-benzofuran-3-yl)-1-piperazinyl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

27. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(5-fluoro-1-benzofuran-3-yl)-1-piperazinyl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

28. A compound according to claim 1, wherein said compound is ((2S)-2-[[4-(7-methoxy-1-benzofuran-3-yl)-1-piperazinyl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

29. A compound according to claim 1, wherein said compound is (2S)-8-methyl-2-[[[(2S)-2-methyl-4-quinolin-2-yl]piperazin-1-yl]methyl]-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

30. A compound according to claim 1, wherein said compound is 2-((3R)-3-methyl-4-[[[(2S))-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinolin-2-yl]methyl]piperazin-1-yl]quinoline-6-carbonitrile or a pharmaceutically acceptable salt thereof.

31. A compound according to claim 1, wherein said compound is (2S)-8-methyl-2-[[[(2R)-2-methyl-4-quinolin-2-yl]piperazin-1-yl]methyl]-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

32. A compound according to claim 1, wherein said compound is (2S)-8-methyl-2-[[4-(2-naphthyl)piperazin-1-yl]methyl]-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

33. A compound according to claim 1, wherein said compound is (2S)-2-[4-(8-methyl-2,3-dihydro-[1,4]dioxino[2,3-f]quinolin-2-yl)-piperazin-1-yl]-quinoline-6-carboxylic acid amide or a pharmaceutically acceptable salt thereof.
34. A compound according to claim 1, wherein said compound is (2S)-2-[4-(2,3-Dihydro-[1,4]dioxino[2,3-f]quinolin-2-ylmethyl)-piperazin-1-yl]-quinoline-6-carbonitrile or a pharmaceutically acceptable salt thereof.
35. A compound according to claim 1, wherein said compound is (2S)-2-[4-(8-Ethyl-2,3-dihydro-[1,4]dioxino[2,3-f]quinolin-2-ylmethyl)-piperazin-1-yl]-quinoline-6-carbonitrile or a pharmaceutically acceptable salt thereof.
36. A compound according to claim 1, wherein said compound is (2S)-2-[4-(2-Methyl-7,8-dihydro-1,6,9-trioxa-3-aza-cyclopenta[a]naphthalen-8-ylmethyl)-piperazin-1-yl]-quinoline-6-carbonitrile or a pharmaceutically acceptable salt thereof.
37. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(6-Bromoquinolin-2-yl)piperazin-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
38. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(6-Bromoquinolin-2-yl)piperazin-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
39. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(6-methoxyquinolin-2-yl)piperazin-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

40. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(6-Trifluoromethoxyquinolin-2-yl)piperazin-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
41. A compound according to claim 1, wherein said compound is 2-[4-(6-Fluoroquinolin-2-yl)-piperazin-1-ylmethyl]-8-methyl-2,3-dihydro-[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
42. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(6-methoxyquinolin-2-yl)-1,4-diazepan-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
43. A compound according to claim 1, wherein said compound is 2-(4-[[[(2S)-8-Methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinolin-2-yl]methyl]-1,4-diazepan-1-yl]quinoline-6-carbonitrile or a pharmaceutically acceptable salt thereof.
44. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(6-Trifluoromethoxy-quinolin-2-yl)-1,4-diazepan-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
45. A compound according to claim 1, wherein said compound is 2-[4-(6-Fluoroquinolin-2-yl)-[1,4]diazepan-1-ylmethyl]-8-methyl-2,3-dihydro-[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
46. A compound according to claim 1, wherein said compound is (2S)-2-[[4-(6-Bromo-quinolin-2-yl)-1,4-diazepan-1-yl]methyl]-8-methyl-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.

47. A compound according to claim 1, wherein said compound is 8-Methyl-2-(4-quinolin-2-yl-[1,4]diazepan-1-ylmethyl)-2,3-dihydro-[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
48. A compound according to claim 1, wherein said compound is 8-Methyl-2-[4-(4-methyl-quinolin-2-yl)-[1,4]diazepan-1-ylmethyl]-2,3-dihydro[1,4]dioxino[2,3-f]quinoline or a pharmaceutically acceptable salt thereof.
49. A method of treating a subject suffering from a condition selected from depression, anxiety, panic disorder, post-traumatic stress disorder, premenstrual dysphoric disorder, attention deficit disorder, obsessive-compulsive disorder, social anxiety disorder, generalized anxiety disorder, obesity, eating disorders, vasomotor flushing, cocaine and alcohol addiction, and sexual dysfunction, comprising the step of:
providing to said subject suffering from said condition, a therapeutically effective amount of a compound according to claim 1 or a pharmaceutically acceptable salt thereof.
50. A method according to claim 49, wherein the condition is depression.
51. A method according to claim 49, wherein the condition is selected from the group consisting of obsessive-compulsive disorder, panic attacks, generalized anxiety disorder, and social anxiety disorder.
52. A pharmaceutical composition, comprising:
an effective amount of a compound according to claim 1 or a pharmaceutically acceptable salt thereof; and
a pharmaceutically acceptable carrier or excipient.